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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/899,449	07/05/2001	Eric Jurgen Van Der Zwan	NL 000364	4094

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PHILIPS INTELLECTUAL PROPERTY & STANDARDS

P.O. BOX 3001

BRIARCLIFF MANOR, NY 10510

EXAMINER

CHAU, COREY P

ART UNIT

PAPER NUMBER

2644

DATE MAILED: 05/06/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/899,449

Applicant(s)

VAN DER ZWAN ET AL.

Examiner

Corey P Chau

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 November 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1 is/are rejected.
- 7) ☒ Claim(s) 2-8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date: _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date: _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S.

Patent No. 6539096 to Sigwanz et al. (hereafter as Sigwanz) in view of U.S. Patent No. 6456219 to Schreiber et al (hereafter as Schreiber), and further in view of U.S. Patent No. 5577129 to Ehara.

3. Regarding Claim 1, Sigwanz discloses a combination of a microphone and a sigma-delta converter having an input connected to an output of the microphone (Fig. 1, references 1a, 1b, 2a, and 2b), to convert a signal generated by the microphone into a digital signal at the output of the sigma-delta converter (abstract). Sigwanz discloses a sigma-delta converter, but only generally; no specific hardware or software is taught. Therefore it would have been obvious of one of ordinary skill to seek known sigma-delta converter. Schreiber for example discloses an analog-to-digital converter including a delta-sigma modulator adapted to produce a stream of pulses, the density of which represents the amplitude of an analog input signal (i.e. microphone) coupled to an input of the delta sigma modulator (abstract; Fig. 1). It would have been obvious to one having ordinary skill in the art at the time the invention to employ any known sigma-delta converters, such as that of Schreiber. Therefore, it would have been obvious to modify

the combination of Sigwanz with the teaching of Schreiber to utilize the analog-to-digital converter of Schreiber to convert a signal generated by the microphone into a digital signal at the output of the analog-to-digital converter. Sigwanz as modified discloses a combination of a microphone and a sigma-delta converter, but does not expressly disclose a bias signal supplied to the microphone by the sigma-delta converter. It is inherent though that the sigma-delta converter has a power supply, as shown by Schreiber (Fig. 1, reference $+V_s$; column 4, lines 59-63; column 5, lines 23-32; column 8, lines 8-15). Ehara discloses a combination of a power supply circuit and a bias circuit disposed between two components instead of separate power supply circuit and a separate bias circuit in order to reduce number of parts in the power supply system. Therefore it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combination of Sigwanz as modified with the teaching of Ehara to replace the separate power supply of the sigma-delta converter of Sigwanz as modified with a combination of a power supply circuit and bias circuit disposed between two components such as the microphone and the sigma-delta converter of Sigwanz as modified, so that the sigma-delta converter is operable to supply a bias signal to the microphone, therefore reducing number of parts in the power system of the sigma-delta converter.

Allowable Subject Matter

4. Claims 2 to 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

5. Applicant's arguments filed 11/03/2004 have been fully considered but they are not persuasive.

6. With respect to Applicant's arguments on page 2, stating that "the combined power supply/bias circuit of Ehara is specifically for an ECM microphone. It would not have been obvious to use such a circuit to power the sigma-delta modulator of Sutterlin", has been noted. However the Examiner respectfully disagrees. The reference Sutterlin was not used in the previous office action, therefore the Examiner cannot address the argument above because the rejection was made with Sigwanz in view of **Schreiber** and in further view of Ehara.

7. With respect to Applicant's arguments on page 2, stating "the bias circuit portion of the combination circuit of Ehara is for applying a power supply voltage to the non-inverting input terminal of the operation amplifier of Ehara. Such an operation amplifier is characteristic of analog system but is not necessarily present in the mainly digital system of Sigwanz", has been noted. However the Examiner respectfully disagrees. Ehara discloses a combined power supply and bias circuit that reduce the number of parts of a power supply system circuit because some parts of the bias circuit can be used as parts of the power supply circuit, and the number of parts of the bias circuit is

decreased by the number of commonly used parts. Sigwanz as modified discloses a combination of a microphone and A/D converter. It is inherent that the microphone needs a bias signal in order to operate. It is inherent that the A/D converter has a power supply circuit. Therefore it would have been obvious to one having ordinary skill in the art to use the teaching of Ehara that some parts of the bias circuit can be used as parts of the power supply circuit, and the number of parts of the bias circuit is decreased by the number of commonly used parts, which will reduce the number of parts of a power supply system circuit. Although Ehara discloses a power supply circuit for microphone and a bias circuit for an amplifier, Sigwanz as modified does not utilize the power supply circuit and bias circuit of Ehara, just the teaching that some parts of the bias circuit of the microphone of Sigwanz as modified can be used as parts of the power supply circuit of the A/D converter of Sigwanz as modified, and the number of parts of the bias circuit is decreased by the number of commonly used parts, which will reduce the number of parts of a power supply system circuit. See Sigwanz, Fig. 1; Schreiber, Fig. 1, reference +V_s; column 4, lines 59-63; column 5, lines 23-32; column 8, lines 8-15; Ehara, Figs. 1 and 3; column 1, lines 48-51; column 2, lines 45-53.

Conclusion

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within


TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Corey P Chau whose telephone number is (571)272-7514. The examiner can normally be reached on Monday - Friday 9:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tran Sinh can be reached on (571)272-7564. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

May 2, 2005


XU MEI
PRIMARY EXAMINER